



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,550	09/27/2006	Ikuo Ando	12699/44	3653
23838 7590 01/13/2009 KENYON & KENYON LLP 1500 K STREET N.W. SUITE 700 WASHINGTON, DC 20005				
EXAMINER JORDAN, TRISTRAM I				
ART UNIT		PAPER NUMBER		
4177				
MAIL DATE		DELIVERY MODE		
01/13/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,550

Applicant(s)

ANDO ET AL.

Examiner

TRISTRAM JORDAN

Art Unit

4177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date 9/27/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-8, 10-15, and 17-18** are rejected under 35 U.S.C. 102(b) as being anticipated by Ritter et al. (US 4,779,577).

In regard to claim 1,

Ritter et al. disclose (the references in parentheses applying to this document) a cooling system (among others: heat exchanger 6, condenser 19) that cools down multiple different heat generators (internal combustion engine 3, air conditioner 20 - the passenger compartment is a heat generator), said cooling system comprising:

- multiple cooling circuits (4, 5 and 6 for the engine coolant, the circuit for the air conditioner 20 and the liquid circuit for the automatic transmission, as mentioned in column 3, line 50 and 51) that adopt multiple different heat exchange media to cool down the multiple different heat generators;
- a heat exchange module (6, 19) that uses outside air to cool down the multiple different heat exchange media of said multiple cooling circuits (4, 5 and 6 for the engine coolant, the circuit for the air conditioner 20 and the liquid circuit for the automatic transmission, as mentioned in column 3, line 50 and 51);
- an outside air supply regulation module (9-13) that regulates a supply of the outside air

used by said heat exchange module to cool down the multiple different heat exchange media; and

- a control module (15) that drives and controls said outside air supply regulation module in response to control signals input from communication related to cooling down the multiple heat generators (the signals that control device 15 receives and sends, as mentioned in column 3, lines 45-62, are a form of communication that is related to cooling down the multiple heat generators since increases in the temperature communication, in particular, trigger either an increase or decrease in the cooling down of the multiple heat generators through increased blower speed and outside air) in a normal state, with no abnormality in communication related to cooling down the multiple heat generators, while driving and controlling said outside air supply regulation module to increase (column 5, line 59-61: "the flaps are simultaneously completely opened and the blower is run at maximum rpm") the supply of the outside air in an abnormal state ("failure of sensor", as mentioned in column 5, line 55) with an abnormality in communication related to cooling down the multiple heat generators (the "failure of sensor" means that the system cannot communicate certain important physical values to the control module).

In regard to claims 2-8,

Ritter et al. teaches:

- the maximum air supply capacity of the claim 2 (column 5, line 60), - the temperature measurement unit of claim 3 (21, 24 and 25), - the working state detecting units as claimed in claim 4 (temperature sensors 21, 24 and 25 detect a "working state" of the

multiple heat generators since the more active the heat generator is the higher its temperature), - the cooling fan of claim 5 (18),

- the water coolant like claimed in claim 6 (column 12, line 24),

- the radiator (6) from claim 7,

the in claim 8 claimed internal combustion engine

In regard to claims 10-15,

In these claims a motor vehicle is claimed. The motor vehicle contains the features as claimed in the claims 1 to 8. As the document of Ritter et al. shows also the motor vehicle, the subject-matter of the claims 10-15 is not new either.

In regard to claim 17,

In this claim, a method for controlling a cooling system with the features of claim 1 is claimed. The features of claim 1 are not new (see rejection of claims 1-8 of this communication). From column 5, lines 51-63 of Ritter et al., it is clear, that Ritter et al. does not only show the device, but also the method. Therefore the subject-matter of the claims 17 is not new.

In regard to claim 18,

The subject-matter of claim 18 is not new because the maximum supply of air is known from document of Ritter et al. (Col. 5, line 60)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 9 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ritter et al. as applied to claim 1 or claim 10 and further in view of Weisman, II et al. (US 5,647,317).

Ritter et al. teach all the limitations of claim 9 or claim 16 except for a heat generator control unit that controls at least one of the multiple different heat generators.

Wiesman, II et al., in discussing a related prior art process, teaches that individual control units for heat generators and that they traditionally respond to "dynamic vehicle situations and initiate appropriate actions." (Col. 1, lines 26-29)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add an additional control layer composed of the heat generator control units taught by Weisman, II et al. (Col. 1, lines 29-33) and have these heat generator control units communicate with Ritter et al.'s control module (15) in a hierarchical manner since Wiesman, II et al. since one in the art would have reasonably recognized and appreciated that implementing the control system for the heat generators as a single control module or a layered (hierarchical) control system would function equivalently in providing a controller to the cooling system of Ritter et al. The incentive for implementing the latter process (i.e. hierarchical control system) would have simply been to obtain the advantage suggested in the Weisman II et al patent which is to provide a more rapid respond to "dynamic vehicle situations and initiate appropriate actions." in real time (Col. 1, lines 26-29).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tristram I. Jordan whose telephone number is 571-270-781. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Yao can be reached at 571-272-1224. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA or CANADA) or 571-272-1000.

/TRISTRAM JORDAN/
Examiner, Art Unit 4177

/Sam Chuan C. Yao/
Supervisory Patent Examiner, Art Unit 4111